

“All for One and One for All”: Negotiating Solidarity Around Power and Oppression in Mathematics Education

Victoria Hand

University of Colorado, Boulder

Imani Masters Goffney

University of Houston

In this essay, the authors, as participants of the Privilege and Oppression in the Preparation of Mathematics Teachers Educators conference, reflect on tensions inherent in standing with and speaking on behalf of communities in an attempt to build and signal solidarity with them. They describe this tension in relation to their membership in the community of researchers who study equity in mathematics education. A particular exchange that arose during whole group discussion at the conference seeded a conversation around other situations they have encountered in this community, and led to the development of a set of “cautionary tales” for the field.

KEYWORDS: mathematics education research, power and oppression

Coming together as researchers, teacher educators, and at a basic level, as human beings, participants at the Privilege and Oppression in the Preparation of Mathematics Teachers Educators conference (PrOMPTE¹) were asked to interrogate and grapple with the multiple intersectionalities of individual privilege and oppression at different levels of social activity (e.g., personal, social, cultural, and institutional). In the process of doing this work, the facilitators from Allies for Change (<http://www.alliesforchange.org/allytrainers.html>) taught conference participants about the possibility and potential of being *allies* for one another, for mathematics teachers, and for children in schools (Duncan-Andrade & Morrell, 2007; Katsarou, Picower, & Stovall, 2010), as participants attempted to name and inter-

¹ Privilege and Oppression in the Mathematics Preparation of Teacher Educators (PrOMPTE) conference (funded by CREATE for STEM Institute through the Lappan-Phillips-Fitzgerald CMP 2 Innovation Grant program), Michigan State University, Battle Creek, MI, October 2012. Any opinions, findings, and conclusions or recommendations expressed herein are those of the authors and do not necessarily reflect the views of the funding agency.

VICTORIA HAND is an assistant professor of mathematics education in the School of Education at the University of Colorado, 249 UCB, Boulder, CO 80309; email: victoria.hand@colorado.edu. Her research interests include culture, learning and identity in mathematics education, situative and critical perspectives on mathematics learning, and teacher noticing for equitable mathematics instruction.

IMANI MASTERS GOFFNEY is an assistant professor in the Department of Curriculum and Instruction in the College of Education, at the University of Houston, 436 Farish Hall, Houston, TX 77204; email: idoggney@uh.edu. Her research focuses on equity and mathematics education and on interventions designed to improve its quality and effectiveness, especially for socially, linguistically, and ethnically diverse students.

rupt structures and processes that marginalize groups of people. While we (Vicki and Imani) see this ally work as critically important, there is also a tension inherent in standing with and speaking on behalf of communities in an attempt to build and signal solidarity with them (Freire, 1970). The impact of such a stance is in part a reflection of the privilege the ally has garnered through predominant power structures. It also gives the impression that allies *understand* all of the experiences of the people and communities they stand for. In this essay, we reflect on this tension by describing a particular exchange that arose during whole group discussion at the conference, and relate this to other situations, or “cautionary tales,” we have encountered in our experience as researchers who study equity in mathematics education.

The Exchange

Several times during the workshop, a white, male, English-fluent participant attempted to speak on behalf of the group of participants. He was promptly reprimanded by the Allies for Change facilitators, who instructed us to speak only for ourselves and not on behalf of others. Their point was to disrupt the privileged position that could make invisible realities and experiences present in the room, and to recognize that no one can truly put themselves in the shoes of another person. This participant expressed frustration with the way his comments were being received by the facilitators. He pointed out that his purpose was to build solidarity among us, as a group of scholars whose research is often positioned at the margins of mathematics education research. The public chastisement left the two of us (Vicki and Imani) feeling torn about the feeling of empowerment from the interruption of privilege, and the discomfort around the interpretation of our friend’s remarks by people who did not know him or his leadership in social justice mathematics education.

We note that a key element of this tension is what the facilitators referred to as “intent versus impact,” in which one’s *intentions* may be honorable, but the *impact* of one’s actions can have (unintended) destructive consequences. Throughout the conference, the facilitators encouraged us to deeply consider the impact of our actions, versus the intentions behind them. We view this type of reflection as inextricably bound up in ally work. In the following sections, we unpack three “cautionary tales” that emerged from our (Vicki and Imani’s) conversations around the situation previously noted. For each one, we identify a key tension and offer suggestions for our work as allies and mathematics educators. Researchers who have come before us have articulated these tensions and suggestions; our point here is to link them to our work as allies and our growth as a research community.

“Our” View of Equity

As the community of mathematics education researchers who study issues of equity grows, we have increased opportunities to define concepts like “equity,” “diversity,” and “social justice” for the broader field (for a critical discussion see Lubinski, 2008; Lubinski & Gutiérrez, 2008; Gutiérrez, 2008). We note that this opportunity also has its drawbacks. Our community, like any other community, operates within and through power structures. These structures are yoked to dominant hierarchies, even as we actively seek to disentangle ourselves from them (Bourdieu, 1991). This situation has inevitably positioned some of us (albeit not necessarily White, middle-income, English-speaking men) with more clout in the field. As these individuals offer their perspectives on equity in research journals and at conferences, the circulation of these perspectives makes it difficult for members with less status to assert alternative ideas. This statement is not to say that some individuals *possess* more power than others, but that the proliferation of certain ideas itself organizes a power structure (Foucault, 1980).

Thus, while our intention may be to enable our equity agenda to play a more prominent role in discussions within mathematics education, the impact of the discursive structures within our profession (such as tenure and academic publishing) limits the range of perspectives that come to be recognized as central to the equity or social justice agendas.

Suggestions for allies:

- Instead of providing a definition of equity, focus on the processes and outcomes you want to enable (Cochran-Smith, 2004; DiME, 2007);
- Include the ideas of colleagues—in particular, junior scholars—in your work; and
- Play around with the concepts of equity, social justice, and diversity within your work and discuss the affordances and constraints of different conceptualizations of them (Wager & Stinson, 2012).

The Methods “We” Use to Study It

“We” can imply consensus and agreement on both the substance and the methods of our research in equity in mathematics education. Many of the participants at the conference shared a deep commitment to social justice; yet employ very different methods and strategies for working on these issues. Variety across these approaches include studying the relation of learning mathematics to social action (Bartell, 2013; Frankenstein, 1983; Gutstein, 2005; Skovsmose, 1994a), the effects of positioning in the classroom (Esmonde & Langer-Osuna, 2010; Hand, 2010; Turner, Gutierrez, & Sutton, 2011), the structure of classroom discourse practices (Herbel-Eisenmann, Choppin, Wagner, & Pimm, 2012; Moschkovich,

2010), the affordances of teaching practices (Aguirre & Zavala, 2013; Battey, 2013; Masters-Goffney, 2010; Meaney, Trinick, & Fairhall, 2013; Rubel & Chu, 2012; Turner et al., 2012), and others. Accepting this range as natural and even welcome is a core tenet of social justice (North, 2006). However, we often train graduate students in a narrow range of approaches, without either experience in or at the very least discussion of other methods. We also limit our own exposure to other methods when we work within the same networks of individuals and draw primarily on their work in our research. While it is important to grow our cadre of researchers who analyze issues of power and marginalization in mathematics education (Gutiérrez, 2007; Martin, 2009; Skovsmose, 1994b; Stinson & Bullock, 2012; Tate, 1995; Valero & Zevenbergen, 2004), this focus on growth should not come at the expense of the natural hybridity that we seek to flourish. Another way that we have experienced the marginalization of methodological approaches within our community is through questions about the evidentiary basis of our claims that are often derived from a lack of understanding about the philosophical and theoretical foundations of these approaches. For example, Parks and Schmeichel (2012) argue that researchers tend to shy away from analyses that link practices in mathematics classrooms and education to broader sociopolitical structures, in part, due to the lack of a venue in the field for discussions around the complexity of identity and power in learning. Their argument was based, in part, on a two-staged review of mathematics education literature: broadly surveying research articles over a 10-year period that included descriptors related to “mathematics” and “race” and carefully reading research articles in the *Journal for Research in Mathematics Education (JRME)* between 2008 and 2011. In particular, Parks and Schmeichel found that more times than not research articles in *JRME* treated race and ethnicity as independent variables, and that most of the articles that did address race and ethnicity in substantive ways were found in the recent *JRME* Special Equity Issue (three out of the five; January 2013). They attribute these tendencies to predominant discourse structures within the field of mathematics education that “[place] an additional burden on researchers who want to write about identities in detailed and political ways, because they must use valuable space to justify why this matters” (p. 247).

Suggestions for allies:

- Seek out methodological approaches across disciplines and frameworks and discuss these with students; and
- Be as detailed as possible about the relation between your research methods, framework, and specific research questions.

Why “You” Should Pay Attention to It

Many of the participants share a common struggle with finding opportunities to discuss their work, given that it is often relegated to special themed issues in journals (e.g., *JRME*, Special Equity Issue, January 2013) or strands at national conferences labeled as equity or social justice. Often, the work also is removed from mainstream conversation in mathematics education where discussions continue to be focused on being “neutral” (Martin, 2003). Because these ideas are not often taken up centrally, as part of the field, it can be tempting for us to take advantage of any and all opportunities to advocate for attention being paid to social justice, equity, and diversity. Examples of opportunities of this kind include serving as a discussant at national conferences, or as a reviewer for education research journals. When in this situation, it can be second nature for us to frame or assess the conversation from the perspective of an equity agenda, and to forego addressing the topic intended by the author. This situation again runs into issues of intent versus impact. First, while it is critically important to interrogate privilege and oppression in any research in mathematics education, doing so without care may inadvertently marginalize the presenters or authors’ work. Second, it can weaken how other people view work on social justice if we are unable to build connections between this topic and other themes in mathematics education. Finally, for authors who are members of underrepresented groups and early career academics, having their ideas and work ignored or significantly critiqued in the very public space of a national conference, or even in the confidential journal review process can reinforce their marginalized status. When any of these situations occur, we argue that they work against the interest of social justice because the author inadvertently pays the price for increasing the visibility of these issues.

Suggestions for allies:

- Carefully consider the identity and position of the authors or presenters whose work is being addressed, and
- Make explicit connections between the work being discussed and core issues of equity and social justice to help others learn new ways of seeing this work.

Final Thoughts

We encourage our colleagues as they enact positions as allies in the disruption of oppression in mathematics to take up the notions of “intent” and “impact” and carefully consider the implications these lenses can have on their activities. Although many efforts around social justice, equity, and diversity in mathematics education research and teaching are well intended, the impact of these has been

negative for particular groups of people, within particular contexts. In the three cautionary tales, we argued that advocating social justice and equity within mathematics education requires the field to allow equity to be broadly defined and to create opportunities for junior colleagues to join and have status in the discussions around these issues. We also argued for senior scholars in the field to carefully attend to the ideas and experiences of junior colleagues who are building expertise and find ways to value their work in public settings. Additionally, we advocate for thoughtfully weaving equity, social justice, and diversity into the fabric of the field of mathematics education—in each teacher preparation course, throughout different research agendas, and in our service. Using a dual lens of intent versus impact can provide a more inclusive set of ideas for deliberately attending to these issues and strengthen and build expertise in the field of mathematics education.

References

Aguierre, J., & Zavala, M. (2013). Making culturally responsive teaching explicit: A lesson analysis tool. *Pedagogies: An international journal*, 8(2), 163–190.

Bartell, T. G. (2013). Learning to teach mathematics for social justice: Negotiating social justice and mathematical goals. *Journal for Research in Mathematics Education*, 44, 129–163.

Battey, D. (2013). “Good” mathematics teaching for students of color and those in poverty: The importance of relational interactions with instruction. *Educational Studies in Mathematics*, 82, 125–144.

Bourdieu, P. (1991). *Language and symbolic power*. Boston, MA: Polity.

Cochran-Smith, M. (2004). *Walking the road: Race, diversity, and social justice in teacher education*. New York, NY: Teachers College Press.

DiME (2007). Culture, race, power, and mathematics education. In F. Lester (Ed.), *Handbook of research on mathematics teaching and learning* (2nd ed., pp. 405–434). Charlotte, NC: Information Age.

Duncan-Andrade, J., & Morrell, E. (2007). *The art of critical pedagogy: Possibilities for moving from theory to practice in urban schools*. New York, NY: Peter Lang.

Esmonde, I., & Langer-Osuna, J. M. (2010). Power in numbers: Student participation in mathematical discussions in heterogeneous spaces. *Journal for Research in Mathematics Education*, 44, 288–315.

Foucault, M. (1980). *Power/knowledge: Selected interviews and other writings, 1972–1977*. New York: The Harvester Press.

Frankenstein, M. (1983). Critical mathematics education: An application of Paulo Freire's epistemology. *Journal of Education*, 165, 315–339.

Freire, P. (1970). *Pedagogy of the oppressed* (M. B. Ramos, Trans.). New York, NY: Herder and Herder.

Gutiérrez, R. (2007). (Re)defining equity: The importance of a critical perspective. In N. Nasir & P. Cobb (Eds.), *Improving access to mathematics: Diversity and equity in the classroom* (pp. 37–50). New York, NY: Teachers College Press.

Gutiérrez, R. (2008). A “gap-gazing” fetish in mathematics education? Problematizing research on the achievement gap. *Journal for Research in Mathematics Education*, 39, 357–364.

Gutstein, E. (2005). *Reading and writing the world with mathematics: Toward a pedagogy for social justice*. New York, NY: Routledge.

Hand & Masters Goffney

All for One and One for All

Hand, V. (2010). The co-construction of opposition within a low-track mathematics classroom. *American Educational Research Journal*, 47, 97–132.

Herbel-Eisenmann, B., Choppin, J., Wagner, D., & Pimm, D. (eds.) (2012). *Equity in discourse for mathematics education: Theories, practices, and policies* New York, NY: Springer.

Katsarou, E., Picower, B., & Stovall, D. (2010). Acts of solidarity: Developing urban social justice educators in the struggle for quality public education. *Teacher Education Quarterly*, 37(3), 137–153.

Lubienski, S. T. (2008). On “gap gazing” in mathematics education: The need for gaps analyses. *Journal for Research in Mathematics Education*, 39, 350–356.

Lubienski, S. T., & Gutiérrez, R. (2008). Bridging the gaps in perspectives on equity in mathematics education. *Journal for Research in Mathematics Education*, 39, 365–371.

Martin, D. (2003). Hidden assumptions and unaddressed questions in mathematics for all rhetoric. *The Mathematics Educator*, 13(2), 7–21.

Martin, D. (2009). Researching race in mathematics education. *Teachers College Record*, 111, 295–338.

Masters-Goffney, I. (2010). *Identifying, measuring, and defining equitable mathematics instruction*. Unpublished doctoral dissertation. The University of Michigan, Ann Arbor, MI.

Meaney, T., Trinick, T., & Fairhall, U. (2013). One size does not fit all: Achieving equity in Māori mathematics classrooms. *Journal for Research in Mathematics Education*, 44, 235–263.

Moschkovich, J. N. (Ed.). (2010). *Language and mathematics education: Multiple perspectives and directions for research*. Charlotte, NC: Information Age.

North, C. E. (2006). More than words? Delving into the substantive meaning(s) of “social justice” in education. *Review of Educational Research*, 76(4), 507–535.

Parks, A. N., & Schmeichel, M. (2012). Obstacles to addressing race and ethnicity in the mathematics education literature. *Journal for Research in Mathematics Education*, 43, 238–252.

Rubel, L., & Chu, H. (2012). Reinscribing urban: Teaching high school mathematics in low income, urban communities of color. *Journal of Mathematics Teacher Education*, 15, 39–52.

Skovsmose, O. (1994a). Toward a critical mathematics education. *Educational Studies in Mathematics*, 25, 37–57.

Skovsmose, O. (1994b). *Towards a philosophy of critical mathematics education*. Boston, MA: Kluwer.

Stinson, D. W., & Bullock, E. C. (2012). Critical postmodern theory in mathematics education research: A praxis of uncertainty. *Educational Studies in Mathematics*, 80, 41–55.

Tate, W. F. (1995). Returning to the root: A culturally relevant approach to mathematics pedagogy. *Theory into Practice*, 34, 166–173.

Turner, E., Drake, C., McDuffie, A. R., Aguirre, J., Bartell, T. G., & Foote, M. Q. (2012). Promoting equity in mathematics teacher preparation: A framework for advancing teacher learning of children’s multiple mathematics knowledge bases. *Journal of Mathematics Teacher Education*, 15, 67–82.

Turner, E., Gutierrez, R. J., & Sutton, T. (2011). Student participation in collective problem solving in an after-school mathematics club: Connections to learning and identity. *Canadian Journal of Science, Mathematics and Technology Education*, 11, 226–246.

Valero, P., & Zevenbergen, R. (Eds.). (2004). *Researching the sociopolitical dimensions of mathematics education: Issues of power in theory and methodology*. Norwell, MA: Kluwer Academic.

Wager, A. A., & Stinson, D. W. (Eds.). (2012). *Teaching mathematics for social justice: Conversations with educators*. Reston, VA: National Council of Teachers of Mathematics.